



Supporting compliance with the **European Deforestation Regulation**

Whitepaper on how to use GS1 Standards
to address EUDR challenges



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1. Introduction

In our interconnected world, transparency is crucial for organisations and higher demands on sustainability drive the need for accurate data throughout company operations. The European Union leads the way with regulations like the Regulation on Deforestation Free Products (EUDR), demanding detailed tracking and reporting on deforestation-free products. As EUDR takes effect from December 30, 2025, companies face challenges to adapt in time.

The purpose of this paper is to provide guidance to companies on how to efficiently address the challenges posed by the EUDR through the use of GS1 standards and services. The paper is a living document that will be updated. To help you to leverage GS1 standards for EUDR purposes, we invite you to connect with your local GS1 Member Organisation (<https://gs1.eu/gs1-in-europe-member-organisations/>)

1.1 The Need for Enhanced Transparency

Enhanced transparency and traceability have emerged as strategic imperatives for organisations worldwide. To meet the growing demand for transparency from trading partners, consumers and investors, many companies are intensifying efforts to facilitate seamless and efficient information sharing across the supply chain.

Regulations have been one of the key drivers, as have created an urgent need for accurate and detailed data about company operations which, as a positive side effect, has helped companies foster the development of solutions to improve supply chain efficiency.

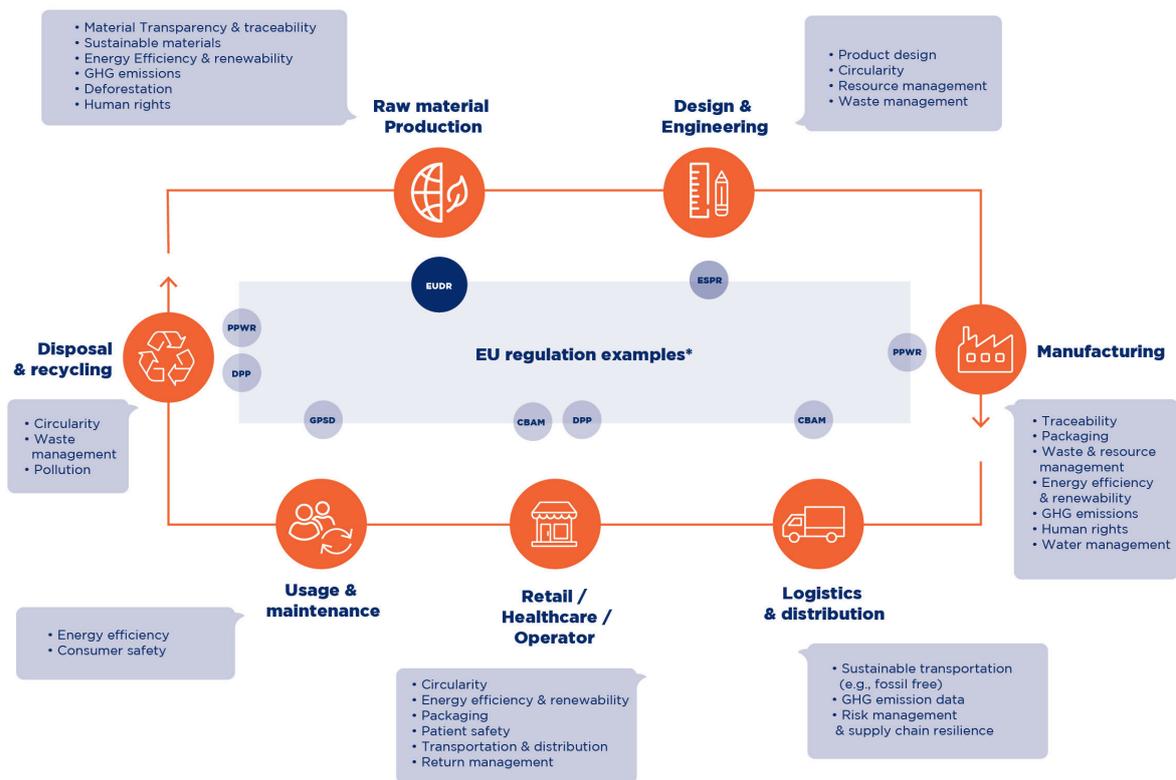
Achieving enhanced transparency and traceability throughout the supply chain has remained challenging. The lack of standardised data collection, processing and sharing creates barriers to cooperation. As rules and regulations continue to stack up, companies are forced to reconsider how they operate.

1.2 Sustainability Regulations in the European Union

In an effort to overcome the challenges of climate change and environmental degradation, the European Union (EU) has launched a number of initiatives, spearheaded by the European Green Deal, to help transform the EU into a modern, resource-efficient and competitive economy. To support the ambitious targets of the European Union, a number of regulations aimed at creating a more environmentally-conscious and socially-responsible corporate landscape within the EU are being put into force.

Regulations and directives such as the Corporate Sustainability Reporting Directive (CSRD), the Eco-design for Sustainable Products Regulation (ESPR), and the Corporate Sustainability Due Diligence Directive (CSDDD), all require detailed reporting based on access to high-quality data from across the supply chain.

The EUDR should not be considered as a stand-alone regulation. It is part of a bigger picture where regulations have become the core of the transition towards a more sustainable value chain.



1.3 The Regulation on Deforestation Free Products

The Regulation on Deforestation Free Products (EUDR), published as (EU) 2023/1115, aimed at reducing the European Union’s impact on global deforestation and forest degradation by promoting the consumption of ‘deforestation-free’ products, is one of the regulations creating a demand for high-quality, trusted data.

This regulation will require companies to collect and report detailed data about specific products and commodities identified as major contributors to deforestation globally. Farmers and many other economic operators, land plots and shipments across the supply chain will need to be identified and connected to trusted data about their origin.

The regulation, which takes effect on December 30, 2025 for large and medium companies and 30 June 2026 for micro and small enterprises, has become a pressing matter as numerous companies remain unprepared to navigate the new demands.

It is worth noting that the Regulation is still under discussion, and it must be clear that it could be retrieved, postponed or undergo changes before the end of 2025. However, given the strong demand from industry for clarity and preparedness, GS1 is proactively engaging with stakeholders and responding to these needs, ensuring that its standards remain aligned with evolving regulatory expectations (read more about it in the conclusions).

2. The Regulation on Deforestation Free Products

The Regulation on Deforestation Free Products aims to address global deforestation and forest degradation by requiring Operators and Traders involved in the commercial activity around seven commodities (cattle, cocoa, coffee, oil palm, rubber, soya, and wood) to conduct extensive due diligence and share information about each consignment made available on the European Union market.

2.1 Scope of the Regulation

The regulation establishes requirements for various commodities and products sold within or exported from the European Union market. The commodities covered by the regulation are cattle, cocoa, coffee, palm oil, rubber, soya and wood. Some derivatives of these commodities like chocolate, leather, tyres, and paper are also covered. A full list of the relevant products, including their extracts indicated by an “ex”, with corresponding Harmonised System (HS) Codes can be found in Annex I of the regulation. Note that, while each listed product has a corresponding HS code, each HS code may also refer to other products that are not covered by the EUDR.

The regulation applies to all of the listed products containing one of the seven commodities, regardless of the quantity of the relevant commodities contained. Products not included in Annex I, however, are exempt from the regulation, even if they contain the relevant commodities. This means that, for instance, soap containing palm oil would not fall under the

regulation. Additionally, the regulation makes some exceptions for the use of recycled materials and packaging material, further information about specific cases and other questions can be found on *the European Commission's website*.

By the 30th June 2025, the Commission will have to present an impact assessment accompanied, if appropriate, by a legislative proposal to extend the scope of this Regulation to other natural ecosystems, including other land with high carbon stocks and with a high biodiversity value such as grasslands, peatlands and wetlands and assess whether it is appropriate to amend or extend the list of relevant products in Annex I refining the selection criteria to ensure the inclusion of the most relevant products that contain, are derived from, or have been produced using key commodities, paying specific attention to the potential inclusion of biofuels (HS code 382600).

2.2 Due Diligence Requirements

To be compliant with the regulation, companies will be required to conduct due diligence on the relevant commodities and products. The regulation states that relevant commodities or products cannot be made available on or exported from the European Union market, unless:

- they are deforestation-free
- they have been produced in accordance with local legislation
- they are covered by a due diligence statement

To ensure this, companies will be required to establish a due diligence system, where they collect and store information about each consignment of the relevant commodities or products for 5 years. The exact information required is listed in Article 9 of the regulation, but can be summarized as:

- **Product description:** Trade name, product type, and a list of relevant products and commodities used to make the product
- **Quantity:** Of the relevant product, expressed in kilograms and (if applicable) in case of volume or number of items, the applicable supplementary units
- **Country of Production:** Including parts thereof when relevant
- **Geolocation:** Details of land plots where commodities were produced, along with the date or time range of production
- **Contact Information:** Names, postal addresses, and email addresses of businesses, individuals, operators, or traders involved.
- **Verification:** Adequate evidence that the products are deforestation-free and comply with relevant legislation in the country of production

Using the information collected, depending on, the size and the role, companies are required to assess the risk of non-compliant products entering their supply chains using the criteria listed under Article 10 in the regulation. Companies must be able to demonstrate how they checked against these risk assessment criteria to determine the level of risk.

Depending on, the size and the role companies must also establish risk mitigation procedures to reduce the risk to a negligible level or no risk. These measures need to align with the criteria specified in Article 11 of the regulation and proper documentation of the measures taken will be required.

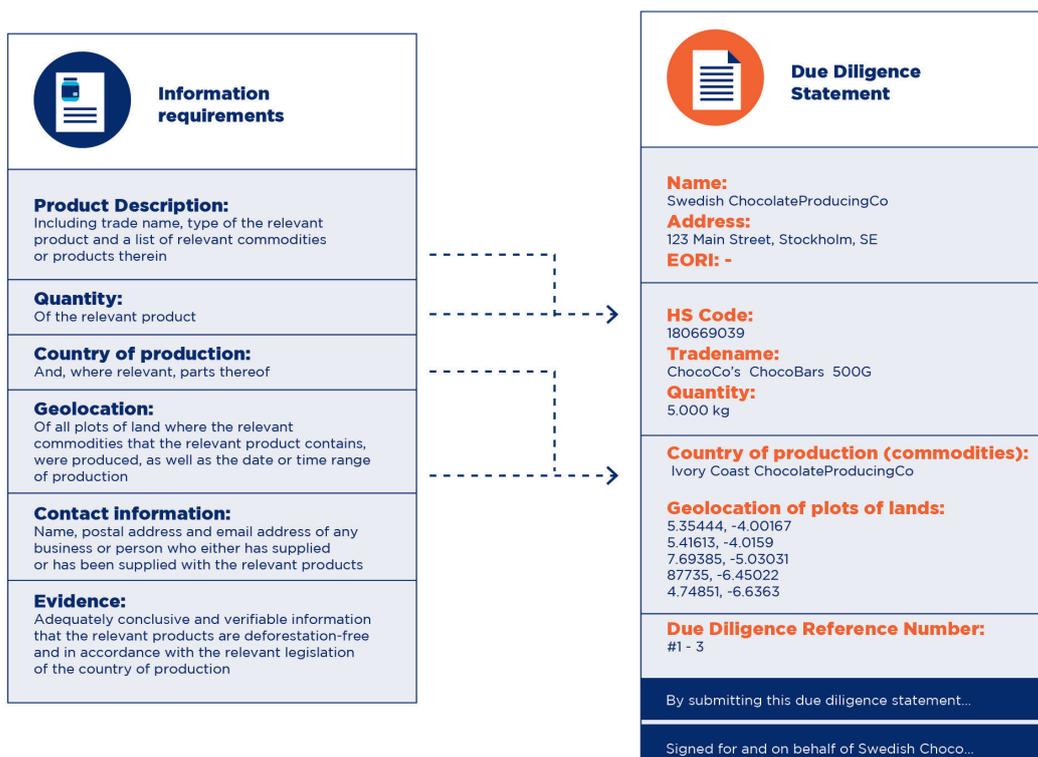


Illustration 2: Information Requirements and Due Diligence Statement.

2.3 Due Diligence Statement

The information collected by companies will be used in two different ways: 1) A subset of it will be used to create the required due diligence statement and 2) All collected data to be provided upon request to the relevant authorities and trading partners to prove the products are deforestation-free and have been produced in accordance with relevant legislation of the country of production.

- The information required in the Due Diligence Statement can be found in Annex II of the regulation and can be summarized as:
- Name, address, and Economic Operators
- Registration and Identification (EORI) number of the company submitting the statement
- Harmonised System (HS) code and free-text description of the product, including trade name and quantity of the relevant products contained
- Country of production and the geolocation of all plots of land where the relevant commodities were produced
- For operators referring to existing due diligence statements, the reference number of those due diligence statements
- A text confirming that due diligence has been conducted in accordance with the regulation
- A signature from the person responsible on behalf of the Operator or Trader

The due diligence statement is required to be kept by the company for 5 years in the same way as the other collected information is. It must also be uploaded to the *European Deforestation Due Diligence Statement Registry*.

This registry is a platform and a database, hosted by the EU, for companies to create and/or upload their Due Diligence Statements. Each time a due diligence declaration is submitted on the platform, the following numbers are generated:

- The reference number, which is the due diligence number. It can be shared with partners or authorities to retrieve the information contained in the due diligence. It also serves to link two due diligence records within the same supply chain.
- The verification number is a security code (token) required to access a due diligence record (it acts like a password)

The Verification Number is a security token known only to the declarant (operator, trader, or its authorized representative, if applicable) and the Competent Authority. It can be communicated confidentially, together with the Reference Number, to a downstream operator, trader, or its authorized representative who wishes to include an upstream DDS reference in their own DDS.

HS codes enable the classification of a product and help determine - most of the time - if a product falls into the scope of EUDR. However, every HS code mentioned in annex 1 with an “ex” is subject to exemptions.

- For instance, latex gloves made with natural latex will fall into the EUDR scope. However, latex gloves made with artificial latex (that does not imply deforestation but have the same HS code) will be exempted. Same thing will happen with a chair. A wooden chair and an iron chair have the same HS code but only the wooden chair will fall into the EUDR scope
- Another exception that needs to be taken into account is the “time exception”. For instance, a cow will fall into EUDR scope only if it is born after the law comes into effect. Which means it will be necessary to make the distinction between the two during the first years of application of EUDR. Put differently, the HS code will not be sufficient to identify a product covered by the EUDR during the first years of its implementation.

Note on HS codes, CN codes, and TARIC codes

HS codes : 6 digits

The nomenclature governed by the Convention on the Harmonized Commodity Description and Coding System, known as the “HS Nomenclature,” is an international classification system developed by the World Customs Organization (WCO). It assigns six-digit codes (HS codes) to goods for consistent classification globally. More information here.

CN codes: 8 digits

European countries can extend HS codes for more specific categorization. By adding 2 numbers, you get a total of 8 digits that help determine the local customs duties for merchandise that arrive on European soil. More information here. The CN codes are often referred to as “Intrastat codes”.

Taric codes: 10 digits

The TARIC Code (Integrated Tariff Rate System) is based on the CN codes, and helps narrow down specific tariff measures or other measures regarding the goods. (e.g.: preferential tariff measures, veterinary controls, etc.). More information here.

The EUDR only cites the HS Code to be part of the Due Diligence Statement. See Annex II of the Regulation.

More information on HS codes, CN codes, and Taric codes can be found on [this European Commission's webpage](#).

In each European Union country, a designated authority is assigned responsibility for making sure due diligence statements are uploaded and that local companies are compliant with the regulation. A list providing the designated authority for each country can be found on the *European Commission's website*.

According to the regulation, every product created within the value chain must have its own Due Diligence Statement with the accompanying reference number and verification number (see illustration 3). A product created within the supply chain can be:

- Raw materials (as products);
- Merged products and/or logistic units upstream in the supply chain;
- Intermediate products that are used as ingredients for the consumer facing products;
- Consumer facing consumer products;
- Combined consumer facing products (for example gift packages);
- Etc.

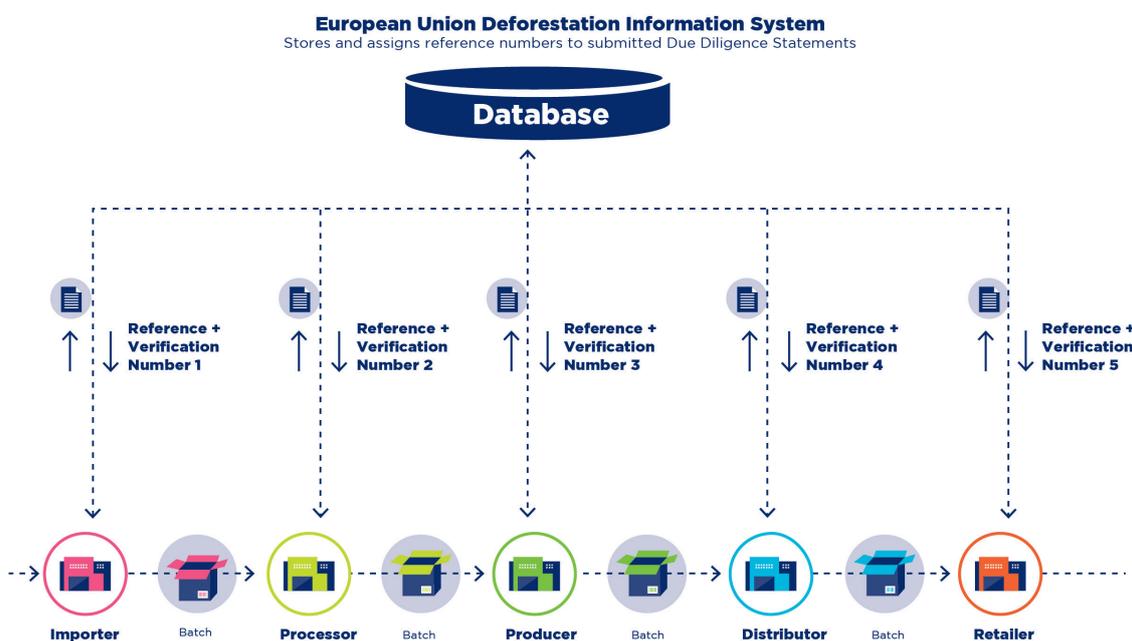


Illustration 3: The European Union Deforestation Information System. NB: This is just an example; the different possibilities are described below.

2.4 Obligations of Operators and Traders

The regulation separates companies on the European Union market involved in the commercial activity around the relevant products and commodities into operators and traders:

- **Operators** are defined as a natural or legal person who places relevant products on the market or exports them in the course of commercial activity, meaning Importers, Producers and Exporters.
- **Traders** are defined as any other actors involved in the supply chain of operators and can be companies such as retailers or distributors.

For larger companies (non-SME), the obligations of operators and traders are the same. Every non-SME operator and non-SME trader is required to ensure that commodities and products made available on the European Union market are compliant and covered by a due diligence statement. Meaning that, although a product is already covered by a due diligence statement conducted by the previous actor in the chain, the non-SME operator and non-SME trader are fully responsible to be compliant with this legislation and should conduct a new due diligence statement. However, non-SME operators and traders have the possibility to refer to due diligence statements that have already been submitted, after having ascertained its compliance.

¹ Additionally an internal reference number is created. This is primarily for the operator's own use.

Micro, Small- and medium-sized enterprises (SMEs) have different due diligence obligations. The exact obligations also depend on whether you are an SME Operator or an SME Trader.

- SME operators** are not required to exercise due diligence or submit due diligence statements on parts of the products that have already been subject to due diligence. In such cases, SME operators shall register the due diligence reference number and provide it to the authorities upon request. SME operators are required to conduct the due diligence exercise for parts of relevant products that have not been subject to due diligence.
- SME traders** are required only to keep the reference number associated to the products handled and the contact information of the operators or traders they have supplied the product with or from whom they have been supplied with the product.

An operator that is a natural person or a microenterprise may mandate the next operator or trader further down the supply chain to submit a statement for them. In the future there will also be a simplified due diligence process for companies sourcing from countries considered low risk.

For the EUDR, 3 high-level supply chains are displayed in the illustration below, varying from imported from outside of the EU; products exported from the EU and products that are produced and sold in the EU.

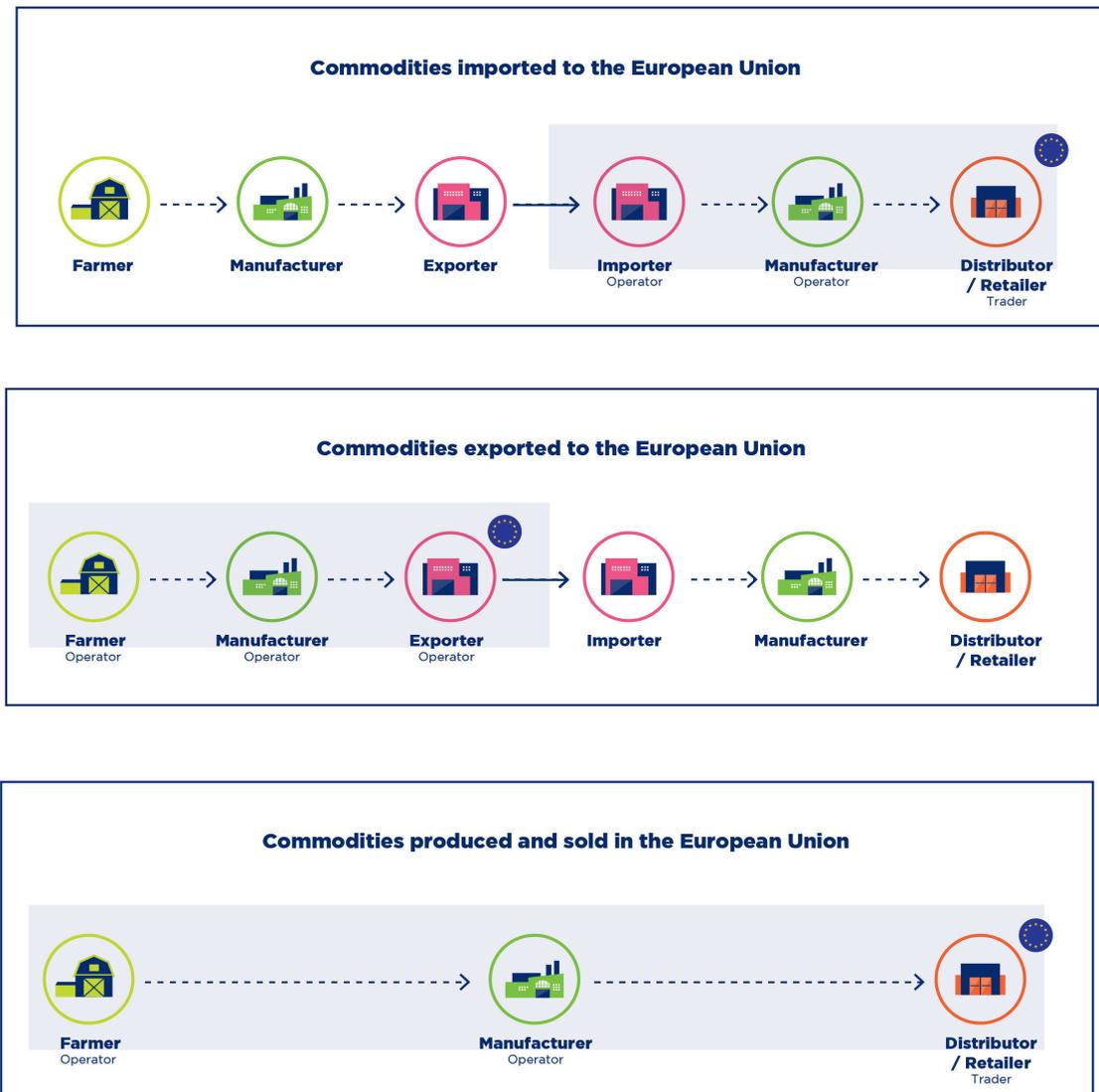


Illustration 4: Simplified examples of Operators and Traders in different market situations.

3. The EUDR process for different supply chain actors



In the previous chapter, a first distinction of roles within the EUDR has been explained for operators and traders. These roles can be taken up by various actors within the supply chain. In this chapter, we will continue explaining the roles, tasks and responsibilities based on the EUDR related to the actors within the supply chain. The following actors are described in detail:

- **Farmer**
- **Manufacturer**
- **Exporter**
- **Importer**
- **Distributor / Retailer**

The distributor and retailer are combined in this chapter as these actors have the same obligations to comply with the EUDR.

The consumer is downstream the last actor of the supply chain. They do not have an active role in the EUDR process, other than as being a consumer of the product and the related information. For this reason, for now, the consumer is excluded in the process descriptions.

Furthermore, a distinction has been made between SMEs and non-SMES in Obligations of Operators and Traders. A further distinction between the EU and non-EU countries will be made, based on illustration 3. This distinction is made because, at this moment, the EUDR Due Diligence requirements only apply to companies based in the European Union.

For all actors, we will describe the following three processes for the EUDR:

- Data collection for Due Diligence
- Risk analysis for Due Diligence
- European Deforestation Due Diligence Registry

Please note that the non-EU actors don't have legal responsibilities linked to EUDR. The legal obligation to collect data, do the risk analysis and submit the due diligence statement, only applies to the EU actors. However, from a business perspective the non-EU actors will have to provide certain data linked to their products (date and time of harvest, and geolocation plot) to make it possible for the EU actors to conduct the risk analysis and submit the due diligence statement.

In order for the correct data collection, it is often necessary to collect data on GTIN and lot/batch level (LGTIN). If this applies it is a best practice to create a batch number, although this is not a formal requirement of the EUDR. Throughout this chapter we refer to the creation of a batch number, applicable to all actors.

Please note: The standards development work needed to aggregate data about field and times of harvest is a work that has been submitted into the Global Standards Management Process (GSMP). If you want to participate in the development of GS1 Standards, please contact your local GS1 Member Organisation here (<https://gs1.eu/gsl-in-europe-member-organisations/>).

Disclaimer: The following information is based upon GS1 in Europe’s current interpretation of the EUDR legislation and certain assumptions were made in case the official information was not yet available (e.g. information sharing through DDDS Registry; which actor falls under operator/trader;...).

In case this information would contradict with updated information from official sources (e.g. upcoming EU guideline on EUDR), the official information provided by the EU prevails in every case over the information shared in this white paper. All user stories in this chapter only are referring to commodities applicable shared in this white paper. All user stories in this chapter only are referring to commodities applicable by the EUDR.



3.1 User story for a Farmer

Description Actor

Actor according to GS1	Actor according to EUDR	Description
Farmer	Operator	<p>A farmer is the initial producer in the agricultural supply chain.</p> <p>They are responsible for cultivating crops or raising livestock, which form the raw materials for the subsequent stages of production and distribution</p>

Description of the Deforestation due diligence process for a Farmer

Please note: based on size (Small/Medium Enterprise) or location (EU or non-EU) read the specific details applicable.

Actions		Details for SMEs	Details for non-SMEs
Data Collection	Non-EU	<p>The farmer collects all data around the crops or livestock:</p> <ul style="list-style-type: none"> The specific fields (through geolocation) where the crop was grown (or all fields where livestock was bred and kept) Date & time of harvest (or slaughter in case of livestock) <p>Based on the collected data above, a batch number may need to be created in order to identify the specific product.</p> <p>Please note: there is no legal responsibility for the farmer in this phase</p>	<p>The farmer collects all data around the crops or livestock:</p> <ul style="list-style-type: none"> The specific fields (through geolocation) where the crop was grown (or all fields where livestock was bred and kept) Date & time of harvest (or slaughter in case of livestock) <p>Based on the collected data above, a batch number may need to be created in order to identify the specific product².</p> <p>Please note: there is no legal responsibility for the farmer in this phase</p>
	EU	<p>The farmer collects all data around the crops or livestock to make the due diligence statement:</p> <ul style="list-style-type: none"> Product description & quantity Geolocation of the specific fields where the crop was grown (or the livestock bred) & country of production Date & time of harvest (or slaughter in case of livestock) Contact information of who you're supplying to Evidence to verify that product is deforestation free <p>Based on the collected data above, a batch number may need to be created in order to identify the specific product²</p>	<p>The farmer collects all data around the crops or livestock to make the due diligence statement:</p> <ul style="list-style-type: none"> Product description & quantity Geolocation of the specific fields where the crop was grown (or the livestock bred) & country of production Date & time of harvest (or slaughter in case of livestock) Contact information of who you're supplying to Evidence to verify that product is deforestation free <p>Based on the collected data above, a batch number may need to be created in order to identify the specific product²</p>
Risk Analysis	Non-EU	Not applicable	Not applicable
	EU	<p>Conduct the risk analysis based on the data collected + other relevant documentation including satellite images to prove there is no risk of deforestation.</p> <p>Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk</p>	<p>Conduct the risk analysis based on the data collected + other relevant documentation including satellite images to prove there is no risk of deforestation.</p> <p>Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk</p>
EU DDDS Registry	Non-EU	Not applicable	Not applicable

² The standards development work needed to aggregate data about field and times of harvest (potentially under a "batch/lot") is a work that will be submitted into GSMP in the near future.

Actions		Details for SMEs	Details for non-SMEs
EU DDDS Registry	EU	<p>1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry):</p> <ul style="list-style-type: none"> Contact information: <ul style="list-style-type: none"> Name Company Address Company Identification of the operator (EORI). Product information: <ul style="list-style-type: none"> Trade name (product name) HS code Quantity of product. Location information: <ul style="list-style-type: none"> Country of production Geolocation of plots of land <p>You will get a Due Diligence Reference number and a Verification Number</p> <p>2) Keep your documentation for at least 5 years (risk analysis, vigilance plans etc.) in case of inquiries by the authorities</p>	<p>1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry):</p> <ul style="list-style-type: none"> Contact information: <ul style="list-style-type: none"> Name Company Address Company Identification of the operator (EORI). Product information: <ul style="list-style-type: none"> Trade name (product name) HS code Quantity of product. Location information: <ul style="list-style-type: none"> Country of production Geolocation of plots of land <p>You will get a Due Diligence Reference Number and a Verification Number</p> <p>2) Keep your documentation for at least 5 years (risk analysis, vigilance plans etc.) in case of inquiries by the authorities</p>

3.2 User story for a Manufacturer

Description Actor

Actor according to GS1	Actor according to EUDR	Description
Manufacturer	Operator	<p>A manufacturer is an individual or organization that transforms a product into another one. Transformation includes non-exhaustively:</p> <ul style="list-style-type: none"> Mechanical and physical transformation (cutting, mixing, etc.) Thermal transformation (cooking, sterilization, etc.) Chemical transformation (fermentation, acidification, etc.) Biological transformation (enzymatic process, etc.) Slaughtering Packaging transformation

Description Deforestation due diligence process for a Manufacturer

Actions		Details for SMEs	Details for non-SMEs
Data Collection	Non-EU	<p>Collect information about the product that you bought from your supplier and provide it to the next actor:</p> <ul style="list-style-type: none"> List of plots of land of where the product comes from Date & time of harvest Product identification: a batch number may need to be created in order to identify the specific product². <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual (intermediary) products.</p> <p>Please note: there is no legal responsibility for the manufacturer in this phase</p>	<p>Collect information about the product that you bought from your supplier and provide it to the next actor:</p> <ul style="list-style-type: none"> List of plots of land of where the product comes from Date & time of harvest Product identification: a batch number may need to be created in order to identify the specific product². <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual (intermediary) products.</p> <p>Please note: there is no legal responsibility for the manufacturer in this phase</p>
Data Collection	EU	<p>In case the manufacturer is the importer or first person placing the product on the market à check table “Importer”</p> <p>In case not: For products that have already been subject to due diligence, no additional data needs to be collected.</p> <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual (intermediary) products</p>	<p>In case the manufacturer is the importer or first person placing the product on the market à check table “Importer”</p> <p>In case not: Collect enough data to make the due diligence statement:</p> <ul style="list-style-type: none"> Product description & quantity Geolocation & country of production Date & time of harvest Contact information of your supplier & of who you’re supplying to Evidence to verify that product is deforestation free Due Diligence Reference Number and the Verification Number of existing Due Diligence Statement from your supplier Complementary information related to risk analysis, mitigation plan, etc. made by your supplier. This information is required to allow you to check that the previous Due Diligence Statement has been done correctly and to help you make your own Due Diligence Statement
Risk Analysis	Non-EU	Not applicable	Not applicable

The standards development work needed to aggregate data about field and times of harvest (potentially under a “batch/lot”) is a work that will be submitted into GSMP in the near future.

Actions		Details for SMEs	Details for non-SMEs
Risk Analysis	EU	<p>In case the manufacturer is the importer or first person placing the product on the market à check table "Importer"</p> <p>In case not: For products that have already been subject to due diligence, it's not required to exercise due diligence, so no risk analysis should be done.</p>	<p>In case the manufacturer is the importer or first person placing the product on the market à check table "Importer"</p> <p>In case not: Conduct the risk analysis based on the data collected and other relevant documentation including satellite images to verify there is no risk of deforestation.</p> <p>Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk.</p> <p>It is possible to rely on the Due Diligence exercise of your supplier after you have ascertained its compliance</p>
EU DDDS Registry	Non-EU	Not applicable	Not applicable
EU DDDS Registry	EU	<p>In case the manufacturer is the importer or first person placing the product on the market à check "importer"</p> <p>In case not: For products that have already been subject to due diligence,</p> <ul style="list-style-type: none"> • Not required to submit a due diligence statement in the Information System • Provide due diligence reference numbers obtained from previous steps in the supply chain upon request of the competent authorities. 	<p>1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry):</p> <ul style="list-style-type: none"> • Contact information: Name Company Address Company Identification of the operator (EORI). • Product information: Trade name (product name) HS code Quantity of product. • Location information: Country of production Geolocation of plots of land • Due Diligence Reference Number (when referring to an existing Due Diligence Statement) <p>You will get a Due Diligence Reference Number and a Verification Number</p> <p>2) Keep your documentation for at least 5 years (risk analysis, mitigation plans etc.) in case of inquiries by the authorities</p>

3.3 User story for an Exporter

Description Actor

Actor according to GS1	Actor according to EUDR	Description
Exporter	Operator	In the case of this regulation, an exporter is a company or organization that sells goods or services from EU to outside EU or from outside EU to EU

Description Deforestation due diligence process for an exporter

Please note: An exporter located within the EU is considered as an operator and also falls under the EUDR obligation when exporting products outside the EU.

Actions		Details for SMEs	Details for non-SMEs
Data Collection	Non-EU (Export from non-EU country towards EU)	<p>Collect information about the product that you bought from your supplier and provide it to the importer in the EU:</p> <ul style="list-style-type: none"> List of plots of land of where the product comes from Date & time of harvest Product identification: a batch number may need to be created in order to identify the specific product². <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual (intermediary) products.</p> <p>Please note: there is no legal responsibility for the exporter in this phase</p>	<p>Collect information about the product that you bought from your supplier and provide it to the importer in the EU:</p> <ul style="list-style-type: none"> List of plots of land of where the product comes from Date & time of harvest Product identification: a batch number may need to be created in order to identify the specific product². <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual (intermediary) products.</p> <p>Please note: there is no legal responsibility for the exporter in this phase</p>
	EU (Export from EU country toward non-EU country)	<p>Only allowed to export products outside the EU when they are covered by a due diligence statement. Collect the reference numbers and provide to authorities upon request.</p>	<p>Collect enough data to make the due diligence statement:</p> <ul style="list-style-type: none"> Product description & quantity Geolocation & country of production Date & time of harvest Contact information of your supplier & of who you're supplying to Evidence to verify that product is deforestation free Due Diligence Reference Number and the Verification Number of existing Due Diligence Statement from your supplier Complementary information related to risk analysis, vigilance plan, etc. made by your supplier. This information is required to allow you to check that the previous DDS has been done correctly and to help you make your own Due Diligence Statement
Risk Analysis	Non-EU (Export from non-EU country towards EU)	Not applicable.	Not applicable.
	EU (Export from EU country toward non-EU country)	<p>The product has already been subjected to Due Diligence conducted by the supplier within the EU. You can rely on the Due Diligence exercise done by your supplier and are not requested to ascertain its compliance.</p>	<p>Conduct the risk analysis based on the data collected and other relevant documentation including satellite images to verify there is no risk of deforestation.</p> <p>Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk.</p> <p>It is possible to rely on the Due Diligence exercise of your supplier after you have ascertained its compliance</p>

The standards development work needed to aggregate data about field and times of harvest (potentially under a “batch/lot”) is a work that will be submitted into GSMP in the near future.

Actions		Details for SMEs	Details for non-SMEs
EU DDDS Registry	Non-EU (Export from non-EU country towards EU)	Not applicable	Not applicable
	EU (Export from EU country toward non-EU country)	The product has already been subjected to Due Diligence conducted by your supplier within the EU. Collect the reference numbers and provide to authorities upon request.	<p>1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry):</p> <ul style="list-style-type: none"> • Contact information: Name Company Address Company Identification of the operator (EORI) • Product information: Trade name (product name) HS code Quantity of product • Location information: Country of production Geolocation of plots of land • Due Diligence Reference Number (when referring to an existing Due Diligence Statement) <p>You will get a Due Diligence Reference Number and a Verification Number</p> <p>2) Keep your documentation for at least 5 years (risk analysis, vigilance plans etc.) in case of inquiries by the authorities</p>

3.4 User story for an Importer

Description Actor

Actor according to GS1	Actor according to EUDR	Description
Importer	Operator	In the case of this regulation, an importer is a company or organization that buys goods or services from EU to outside EU or from outside EU to EU

Description Deforestation due diligence process for an importer

Actions		Details for SMEs	Details for non-SMEs
Data Collection	Non-EU	Not applicable	Not applicable
	EU	Collect enough data to make the due diligence statement: <ul style="list-style-type: none"> • Product description & quantity • Geolocation & country of production • Date & time of harvest • Contact information of your supplier & of who you're supplying to • Evidence to verify that product is deforestation free 	Collect enough data to make the due diligence statement: <ul style="list-style-type: none"> • Product description & quantity • Geolocation & country of production • Date & time of harvest • Contact information of your supplier & of who you are supplying to • Evidence to verify that product is deforestation free
Risk Analysis	Non-EU	Not applicable	Not applicable

Actions		Details for SMEs	Details for non-SMEs
Risk Analysis	EU	Conduct the risk analysis based on the data collected + other relevant documentation including satellite images to verify there is no risk of deforestation. Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk	Conduct the risk analysis based on the data collected + other relevant documentation including satellite images to verify there is no risk of deforestation. Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk
EU DDDS Registry	Non-EU	Not applicable	Not applicable
	EU	Then it is required to: 1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry): <ul style="list-style-type: none"> • Contact information: <ul style="list-style-type: none"> Name Company Address Company • Identification of the operator (EORI) • Product information: <ul style="list-style-type: none"> Trade name (product name) HS code Quantity of product • Location information: <ul style="list-style-type: none"> Country of production Geolocation of plots of land <p>You will get a Due Diligence Reference Number and a Verification Number</p> 2) Keep your documentation for at least 5 years (risk analysis, vigilance plans etc.) in case of inquiries by the authorities	Then it is required to: 1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry): <ul style="list-style-type: none"> • Contact information: <ul style="list-style-type: none"> Name Company Address Company • Identification of the operator (EORI) • Product information: <ul style="list-style-type: none"> Trade name (product name) HS code Quantity of product • Location information: <ul style="list-style-type: none"> Country of production Geolocation of plots of land <p>You will get a Due Diligence Reference Number and a Verification Number</p> 2) Keep your documentation for at least 5 years (risk analysis, vigilance plans etc.) in case of inquiries by the authorities

The standards development work needed to aggregate data about field and times of harvest (potentially under a “batch/lot”) is a work that will be submitted into GSMP in the near future.

3.5 User story for a Distributor / Retailer

Description Actor

Actor according to GS1	Actor according to EUDR	Description
Distributor	Trader	The party that distributes the goods between a producer or manufacturer or to a downstream entity such as a retailer. Please note: Especially outside of the EU “a distributor” can be almost any micro business (one person only).
Retailer	Trader	The party that sells the final goods to the consumer.

Description Deforestation due diligence process for Distributor / Retailer

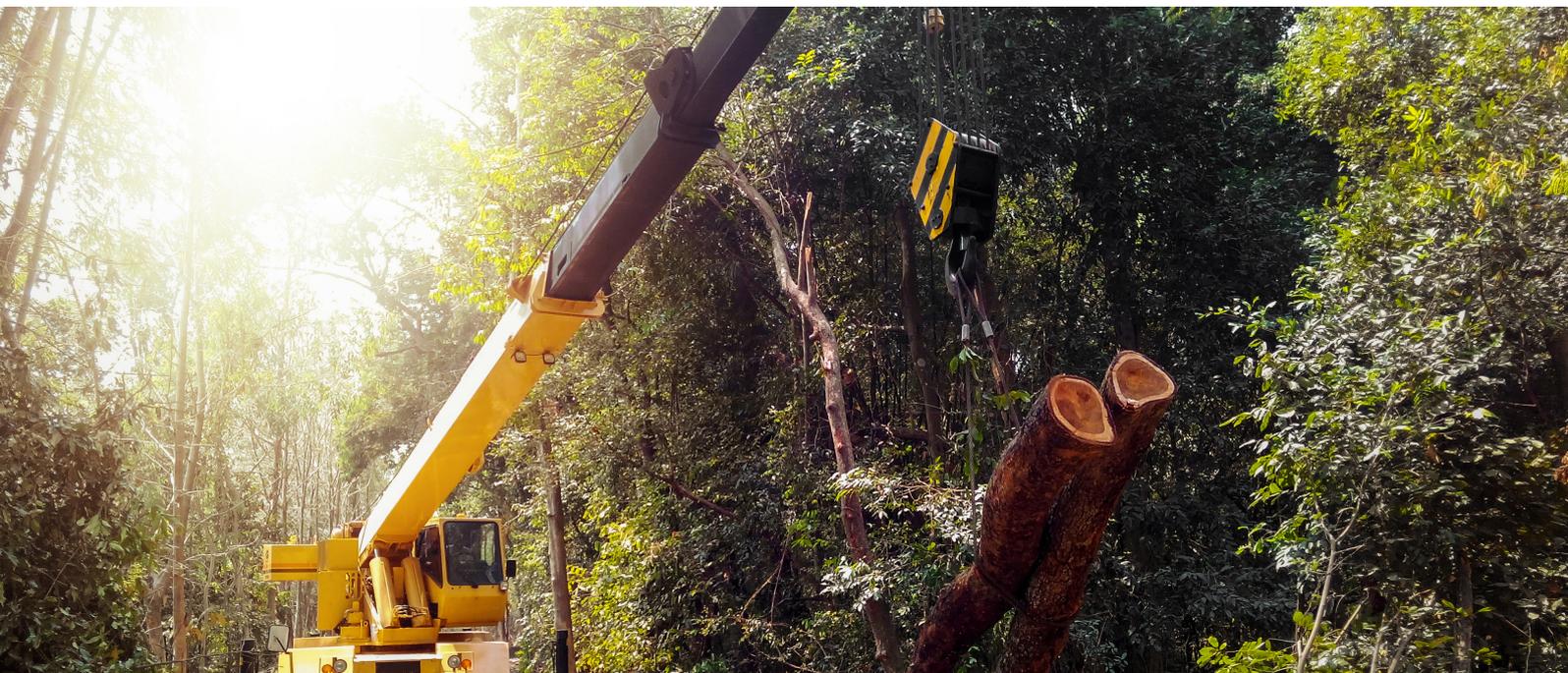
Actions		Details for SMEs	Details for non-SMEs
EU DDDS Registry	EU	No new Due Diligence Statement needs to be entered in the system. Collect and keep Due Diligence reference number for all the products.	Then it is required to: 1) Enter the required Due Diligence data into the European Due Diligence Statement Registry (EU DDDS Registry): <ul style="list-style-type: none"> • Contact information: <ul style="list-style-type: none"> Name Company Address Company Identification of the operator (EORI) • Product information: <ul style="list-style-type: none"> Trade name (product name) HS code Quantity of product • Location information: <ul style="list-style-type: none"> Country of production Geolocation of plots of land • Due Diligence Reference Number (when referring to an existing Due Diligence Statement) <p>You will get a Due Diligence Reference Number and a Verification Number</p> 2) Keep your documentation for at least 5 years (risk analysis, vigilance plans etc.) in case of inquiries by the authorities.

Description Deforestation due diligence process for Distributor / Retailer

Actions		Details for SMEs	Details for non-SMEs
Data Collection	Non-EU	<p>Collect information about the product that you bought from your supplier and provide it to the next actor:</p> <ul style="list-style-type: none"> List of plots of land of where the product comes from Date & time of harvest Product identification: a batch number may need to be created in order to identify the specific product² <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual products.</p> <p>Please note: there is no legal responsibility for the distributor or retailer in this phase</p>	<p>Collect information about the product that you bought from your supplier and provide it to the next actor:</p> <ul style="list-style-type: none"> List of plots of land of where the product comes from Date & time of harvest Product identification: a batch number may need to be created in order to identify the specific product² <p>In case of mixed goods (merging intermediary products) there is also a need to integrate and keep track of all collected data from the individual products.</p> <p>Please note: there is no legal responsibility for the distributor or retailer in this phase</p>
	EU	<p>Only allowed to make products available on the market when they are covered by a Due Diligence Statement.</p> <p>Collect and keep info about products:</p> <ul style="list-style-type: none"> Info on your suppliers (name, registered trade mark, postal address, email, web address) Info on whom you supply the product to (name, registered trade mark, etc.) 	<p>Collect enough data to make the due diligence statement:</p> <ul style="list-style-type: none"> Product description & quantity Geolocation & country of production Date & time of harvest Contact information of your supplier & of who you're supplying to Evidence to verify that product is deforestation free Due Diligence Reference Number and the Verification Number of existing Due Diligence Statement from your supplier Complementary information related to risk analysis, vigilance plan, etc. made by your supplier. This information is required to allow you to check that the previous Due Diligence Statement has been done correctly and to help you make your own Due Diligence Statement
Risk Analysis	Non-EU	Not applicable	Not applicable
Risk Analysis	EU	No new risk analysis needs to be conducted.	<p>Conduct the risk analysis based on the data collected + other relevant documentation including satellite images to verify there is no risk of deforestation.</p> <p>Prepare vigilance plan (with risk mitigation measures) in case of non-negligible risk.</p> <p>It is possible to rely on the Due Diligence exercise of your supplier after you have ascertained its compliance</p>
EU DDDS Registry	Non-EU	Not applicable	Not applicable

The standards development work needed to aggregate data about field and times of harvest (potentially under a “batch/lot”) is a work that will be submitted into GSMP in the near future.

4. The EUDR and GS1 standards



This chapter provides guidance as to how GS1 standards can be leveraged to meet the requirements of the EUDR. It includes all relevant GS1 standards that can be used, independently of which actor you are in the supply chain. Downstream actors in the supply chain, such as producers / manufacturers, distributors and retailers are already familiar with the use of GS1 standards. Upstream, there is an opportunity to start using GS1 standards to identify locations and products and use these identifiers throughout the supply chain. In the final part of this chapter, the actions related to GS1 standards and services, including the European Deforestation Due Diligence Statement Registry (EU DDDS Registry) are summarised in tables for the supply chains applicable:

- Products imported to and sold in the EU
- Products exported from the EU
- Products produced and sold in the EU

4.1 Relate the EUDR to GS1 standards

GS1 standards can help in the EUDR process on the following topics:

- Identifying farmers and plots of land
- Identifying commodities and products
- Capturing data and tracing shipments
- Sharing required data between actors
- Verifying data and ensuring compliance

4.1.1 Identifying farmers and plots of land

GS1 standards can help in the EUDR process on the following topics:

- Identifying farmers and plots of land
- Identifying commodities and products
- Capturing data and tracing shipments
- Sharing required data between actors
- Verifying data and ensuring compliance

One of the key criteria to ensure compliance with regulation is to be able to trace the relevant commodities used in products back to their origin and identify the actor responsible for its production. By requiring that suppliers identify themselves with unique identifiers like Global Location Number (GLN), actors responsible for reporting on EUDR can efficiently map out their supply chain and attribute information required in the reporting to them in a standardised way.

The actors responsible for reporting on EUDR will, for example, need to collect names, postal addresses, and email addresses of all suppliers, along with precise coordinates for the plots of land where the relevant goods have been produced, extracted or processed or the animals have been reared/kept.

Parts of this information will also need to be made available to authorities and shared with actors further down the supply chain.

The actual collection of, for example, geographic coordinates will have to be done by the individual supplier. If they do not already have access to this information, there are various methods to get it, for example by using mobile phones and freely available digital applications, such as a Geographic Information Systems (GIS). It is advised to connect the data to a unique identifier, such as a GLN, that is recognised by the European Deforestation Due Diligence Statement Registry.

4.1.2 Identifying commodities and products

Operators must also be able to tie the commodities used in their products to the identified suppliers and the plots of lands the commodities originate from, along with the additional information set out in the regulation. By assigning commodities, and products made using those commodities, a unique identifier

the Global Trade Item Number (GTIN), suppliers can store information such as trade name and type of product in a standardised way. When combined with a batch number, additional information, such as production time and location, can also be recorded.



1. Identify objects in the supply chain

Illustration 5: Selection of GS1 Standards and Services.

The standards development work needed to aggregate data about field and times of harvest (potentially under a “batch/lot”) is a work that will be submitted into GSMP in the near future.

4.1.3 Capturing data and tracing shipments

The commodities covered by the regulation can sometimes be a part of a global supply chain where they are traded in bulk and mixed along the way. To be able to put commodities on the European Union market, the compliant commodities must have been kept separate from non-compliant commodities or commodities of unknown origins along the way.

The Serial Shipping Container Code (SSCC) is a unique identifier used for logistic units such as cases, pallets, or containers. Through the use of an SSCC, each logistic unit can be linked to information about its content, including which batches of what products it contains (GTIN + batch number) and what quantity, along with the sending and receiving parties (GLN) and many other things that can help companies ensure their shipments

have remained compliant throughout the supply chain.

One significant part of being able to trace products is the use of data carriers such as barcodes, QR-codes and RFID-tags to capture data throughout the supply chain. Barcodes can be encoded with the GTIN, GLN or SSCC and connected to information which is made available when scanned. This makes it easier to identify and separate compliant commodities during storage and transportation. Additional information such as best-before-dates, serial numbers, and lot numbers may also be encoded into the barcodes.

4.1.4 Sharing required data between actors

Once identified, a seamless exchange of information about suppliers and batches (if applicable) of the relevant commodities and their relevant derivatives must be enabled between actors in the supply chain. This is to allow not only for the creation of due diligence statements but also to allow for the proper control of due diligence conducted by actors further up the supply chain.

The data that will be required for companies to collect and use in the due diligence statement is sometimes referred to as traceability data. Traceability data is data referring to a specific traceability event, such as processing or shipping of goods. Traceability data usually contains a combination of master data about products and locations and data specific to the traceability event, such as production time, quantity, and batch information about the products involved batch. To comply with EUDR the Reference Number of the Due Diligence Statement can be added.

The GS1 Registry Platform (GRP) is a global registry of GTINs and GLNs that can be used to share small sets of **Master data** about products or locations between actors in the supply chain. By registering and making their GLN and GTINs searchable on GRP, suppliers can allow actors across the supply chain to verify authenticity of the GLNs/GTINs and access information about them and their products. The GRP also provides an opportunity to register links to additional product-, party- or location-related data stored in the suppliers' own repositories.

For sharing of more product Master Data, there is growing interest in using more recent GS1 standards such as the **GS1 Web Vocabulary** and the **Global Data Model (GDM)**. These two, combined with the GS1 Registry Platform's linking feature, offers a modern, flexible methodology by which master data about products, parties and locations can be easily accessed in a scalable manner, no matter where that data is being authoritatively stored or kept.

These files should apply the GS1 Web Vocabulary, an official extension to schema.org, which is a method for describing trade items, companies, locations, and more using linked data concepts. This structured data, often in the form of JSON-LD documents, enables IT applications to understand the contained information semantically. By leveraging simple Web API calls, businesses can efficiently access up-to-date product, location, and party master data on demand. Exchanging data can be addressed by alternative solutions as well. Parties using data

repositories such as the **GS1 Global Data Synchronisation Network (GDSN)** can share structured master data with business partners on product level. Companies who are already actively working with Electronic Data Interchange (EDI) can use these for the efficient exchange of additional master data as well as transactional data (such as orders, delivery notes and invoices) on batch level (if applicable).

For sharing batch specific data, such as the time of production, companies will be dependent on utilizing standards for **visibility event data**. Visibility event data are records of the completion of business process steps. Each visibility event captures what objects participated in the process, when the process took place, where the objects were and will be afterwards, and why. The GS1 EPCIS standard enables disparate applications to create and share visibility event data, both within and across enterprises. Data that can then be made available via GRP and the extended product information.

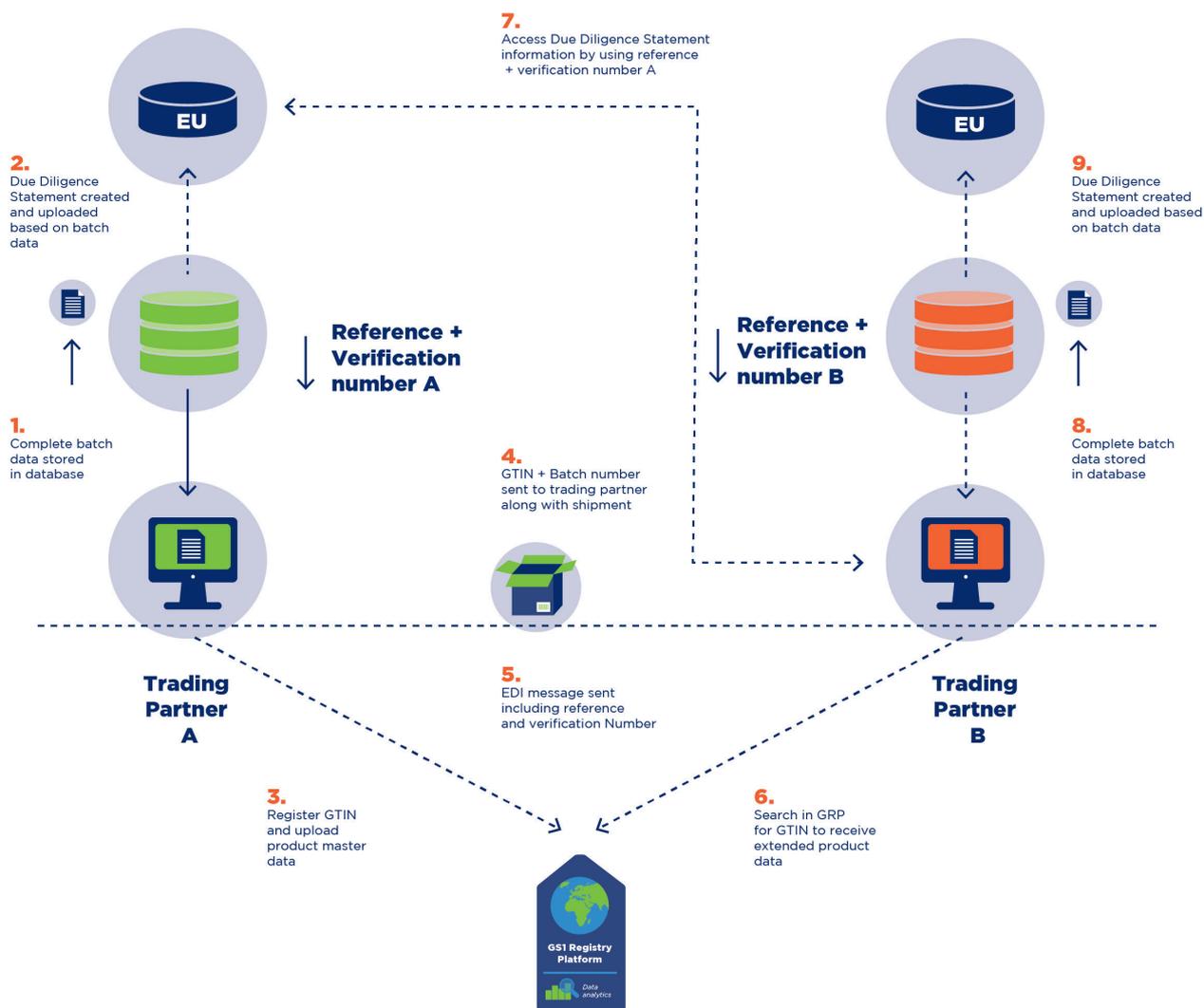


Illustration 6: Example of gathering batch data from upstream trading partners with GS1 Standards and Services.

4.1.5 Verifying data and ensuring compliance

With the help of standardised ways of identifying, capturing, and sharing data it will be easier and more efficient for actors to trace commodities and products throughout the supply chain. One of the key challenges that remains will be to verify that commodities were compliant. There are many different proposed solutions to this problem, using remotely sensed information (air photos, satellite images) or other similar data (e.g. photograph in the field with linked geotags and time stamps) is one way to verify whether sites are linked to deforestation or not.

Various vendors offer different solutions to address these and other information needs related to traceability in general and different regulations in particular. No matter how companies decide to address these challenges, interoperability between different solutions will be a key to efficiency. Enterprise systems and applications that have certified compliance with relevant standards are much more likely to support a high level of interoperability for the exchange of traceability data which in the end means time and resources saved for all actors involved across the supply chain.

4.2 Getting started with GS1 Standards and Services

In the context of the European Regulation on Deforestation (EUDR), companies can leverage GS1 Standards and Services to enhance supply chain transparency. Key steps include adopting standards-based product, location, and shipment identification, educating suppliers about standardised data models, and utilizing services like the GS1 Registry Platform.

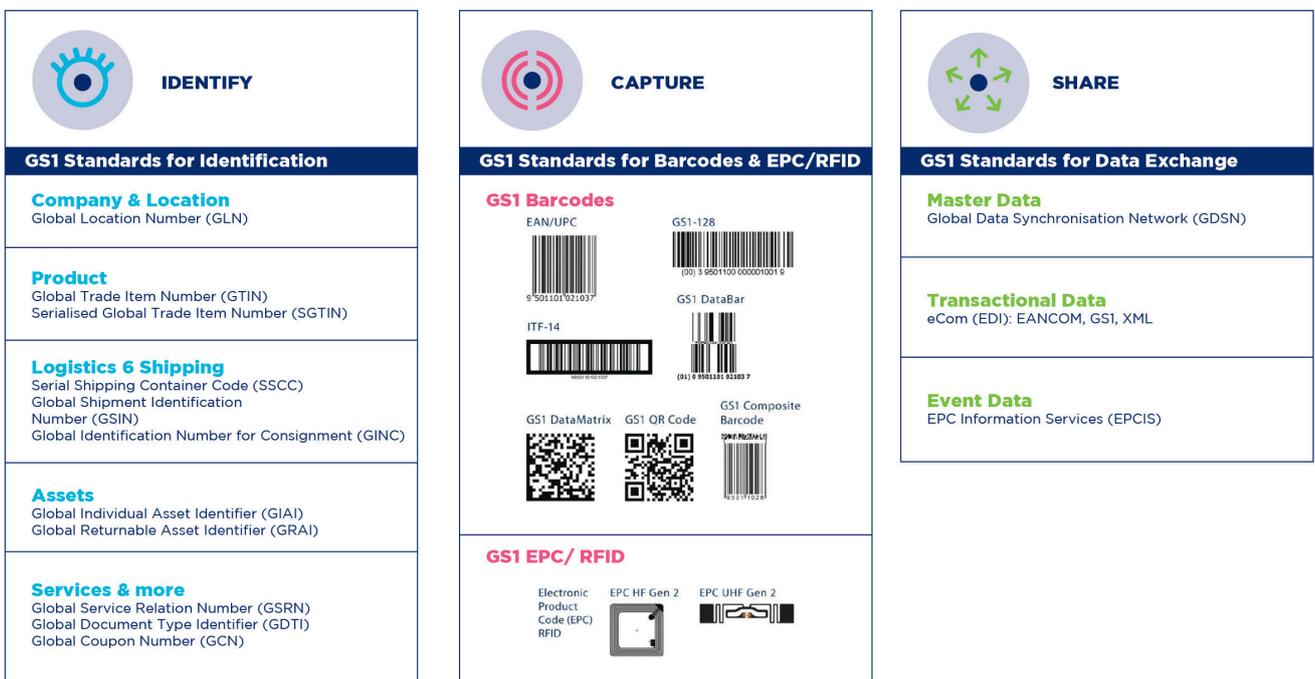


Illustration 7: Overview of GS1 standards according to Identify, Capture and Share.

Disclaimer: Please note that the description of the GS1 standards and services in this chapter are high level descriptions. For the full and actual descriptions of the GS1 standards and for normative information on implementation, please check the official GS1 documentation. Links are provided throughout the chapter.

4.2.1 Identify: Generate and activate identifiers

GS1 identification standards define unique identification codes (called GS1 identification keys) which may be used by an information system to refer unambiguously to a real-world entity such as a:

- Trade item (with a Global Trade Item Number aka GTIN)
- Logistics unit (with a Serial Shipping Container Code aka SSCC)
- Physical location and legal entity (with a Global Location Number aka GLN)
- Etc.

These numbers are globally unique and consist of a GS1 Company Prefix, assigned uniquely by a GS1 organisation to a specific brand owner. Once identified, you can use online services to activate and share information about the identified entity.

The table below outlines some common business needs that you may have and explains how to get started with identification using the GS1 system. Note that some of these business needs are relevant to the requirements of EUDR, while other business needs are also listed to help you get started to leverage the GS1 system across your business.

Business Needs	How to get started
Company Identification / GS1 Company Prefix (GCP)	<ul style="list-style-type: none"> • Become a member of a GS1 Member Organisation (MO) of choice (home country is advised). Contact any of the 118 GS1 Member Organisations • Obtain a GS1 Company Prefix (GCP) license in order to assign GS1 keys
Location Identification	<ul style="list-style-type: none"> • Assign a Global Location Number (GLN) to identify the legal entity • Assign a GLN for the main location of the organisation (location-ID) • Identify sub-locations within your organisation with (sub-)GLNs. Some examples: for farms, this can be all fields; for a logistic provider, all docking stations, etc. • Register data on legal entities and physical locations in the local "Activate tool" of your chosen GS1 Member Organisation. This allows you to create and manage identifiers easily and makes basic data available globally
Product, Batch and Logistics Unit Identification	<ul style="list-style-type: none"> • Assign GTINs for all products to specify products that will be traded. • Enter data on products in the local "Activate tool" of your chosen GS1 Member Organisation. This allows you to create and manage identifiers easily and makes basic data available globally. • If more granular identification is needed, ensure that a batch or lot number is assigned for specific harvests/intermediate products. • For all, but especially SMEs other product identification systems can be used. • If identification of logistics units is needed, you can create a Serial Shipping Container Code (SSCC)



Illustration 8: Plots of lands, farmer, and business partners are identified with a GLN; products are identified with a GTIN; shipments are identified with an SSCC.

The full explanation of the use of GS1 standards to identify can be found in the General Specifications.

4.2.2 Capture: Label products and logistic units

Capture means the translation of your identification keys (and possible additional data) into a machine-readable format, such as linear barcodes, the next generation of barcodes, or RFID tags. All GS1 identification keys can be converted into machine-readable data carriers so that the coded information can be read automatically. For example, a barcode can be scanned on a pallet, and an RFID tag could be read at certain points of sale.

The best type of data carrier to use depends on the nature and quantity of information you wish

to encode, the scanning environment, the material on which you need to print the data carrier and possibly the requirements of the business partner.

The table below outlines some common business needs that you may have related to labelling and barcodes and explains how to get started with barcodes using the GS1 system. Note that none of these business needs are explicitly required for compliance with EUDR, but they are listed to help you get started to leverage the GS1 system across your business.

Business Needs	How to get started
Retail Product labelling	<ul style="list-style-type: none"> Create a label for the product that contains a barcode that can be scanned at the retail Point-of-Sale. This can be a linear barcode, or a 2D barcode (as from 2027): <ul style="list-style-type: none"> . EAN-13: for consumer facing goods (linear) . QR powered by GS1 (2D barcode) . GS1 Data Matrix (2D barcode) . Data Matrix (2D barcode) The QR code and Data Matrix mentioned above can contain a GS1 Digital Link For consumer facing products the barcode should be included in the artwork / packaging of the product
Raw materials or Intermediate Products labelling	<ul style="list-style-type: none"> If products are being shipped without logistic labels and/or sharing of transactional data (see below) Application identifiers (AIs) can be used to share specific EUDR data such as the Due Diligence reference number and verification number on the label (in human readable text) and encoded in an additional GS1-128 barcode. <p>Please note: A work request is being submitted into GSMP to support this business need.</p>
Logistic unit labelling	<ul style="list-style-type: none"> Create a GS1 logistic label (see visual below). This contains the GS1-128 barcode containing the SSCC as the identifier of the logistic unit. In addition, a second or even third GS1-128 can be included containing other information that may be relevant to your downstream trading partners e.g. GTIN, batch, Best Before Date, ... If the actor is not in the EU or is not using an electronic delivery message (DES-ADV, see Sharing required data between actors)
Physical location labelling	<ul style="list-style-type: none"> Create labels for your physical (sub)locations or add another barcode containing the location identifier (GLN) to the logistic label. This can be a linear or 2D barcode or an RFID-tag, depending on the scanning environment
GS1 Digital Link URI	<ul style="list-style-type: none"> Through the use of a QR code with a GS1 Digital Link URI encoded inside of it, additional information can be shared for (mainly) consumer facing products. GS1 Digital Link is a way to connect a scanned barcode directly to the web, allowing the company to directly link a scan to relevant information Over time, your chosen GS1 Member Organisation will offer tools that allow you to associate multiple relevant links to information related to your product directly into the global registries



Illustration 9: Example Logistics Label containing an SSCC.

³ Please visit 2D barcodes for your Retail business | GS1 for more info on the global migration to 2D barcodes

⁴ A work request is submitted to GSMP in order to support the business need to create an Application Identifier that can accommodate the reference number and the verification number.

4.2.3 Exchange data: Share master data, transactional data and event data

GS1 standards for information sharing include data standards for master data, business transaction data, and physical event data, as well as communication standards for sharing this data between applications and trading partners. The information that needs to be shared between actors can be identified as static (master data) and dynamic (transactional data, traceability data, event data).

The table below outlines some common business needs that you may have related to data sharing and explains how to get started sharing data using the GS1 system. Note that none of these business needs are explicitly required for compliance with EUDR, but they are listed to help you get started to leverage the GS1 system across your business.

Business Needs	How to get started
Master data sharing	<ul style="list-style-type: none"> To share relevant master data with the next actor in the supply chain, GS1 languages for master data sharing may be used <ul style="list-style-type: none"> GDSN: To exchange data through GDSN, please connect with a solution provider that offers this data exchange solution. For more information, reach out to your chosen GS1 Member Organisation. EDI: For sharing master data through EDI you can use the align messages. For more information on how to do this please connect with a GS1 Member Organisation or a solution provider. Web Vocabulary: A method for describing products, companies, locations, and more using linked data concepts, such as through JSON-LD files, enabling IT applications to understand and process the information semantically. These documents can be discovered, provided, and accessed via the Web. For more information, connect with a GS1 Member Organisation or a solution provider. Verified by GS1: The GS1 Registries are a set of global, neutral and trusted registries managed by GS1 offering companies and trading partners access to foundational information about products, locations and companies identified with a GS1 identifier. All of this data from the GS1 Registries is accessible through a service called Verified by GS1. It is advised to comply with the Global Data Model Standard to exchange data with the business partners. If applicable to include the HS code (or CN code / Intrastat code). Within GDSN it is possible to indicate whether an the EUDR is applicable for a trade item. For this you use two attributes (including a high level instruction):regulationTypeCode (BMS-id 3070) - for this attribute a codelist is available that includes 'DEFORESTATION_REGULATION'. This needs to be selected if applicable. The attribute can be used multiple times (also other regulations). isTradeltemRegulationCompliant (BMS-ID 3074) - this field needs to be used if a the EUDR is applicable for the trade item (TRUE, FALSE, Not applicable).
Transactional data sharing	<ul style="list-style-type: none"> Master data alignment is a necessary step of GS1 EDI implementation, this can be any form agreed upon. Make sure the infrastructure/software/service is in place. You can send out an order response message (ORDRSP) when the electronic order from your business partner is received, as a confirmation and this message can include relevant details of the order When shipping the products to the buyer, a despatch advice message can be sent, which can contain relevant details of the shipped goods In the EANCOM codelist 1153 "Reference qualifier" two code values are added: DDR (Due Diligence Reference Number) and DDV (Due Diligence Verification Number)
Event data sharing	<ul style="list-style-type: none"> More detailed information (time of production, transformation events, any business process step) can be shared by using standards for visibility event data. The information in an EPCIS event records the essentials of what happened during a step of a business process in which physical or digital objects were handled, expressed via the four dimensions of what, where, when, why and, if applicable, how. A potential solution approach that takes into account the upstream part of the supply chain as well as downstream has been worked out by GS1 Germany in the Green paper How GS1 standards can help to meet the EU Deforestation Regulation. In a nutshell, the Green Paper suggests an EPCIS event which includes the relevant dynamic data (e.g. quantities) corresponding with what is submitted in a given DDS to the EU system. An operator/trader provides this EPCIS event to the respective recipient. Note that static data (e.g. a supplier's postal address) is provided through other means (e.g. GS1 Web Vocabulary files that are discoverable via VbG or GS1-compliant resolvers)
GS1 Digital Link	<ul style="list-style-type: none"> Through a resolver by using the right link type it is possible to share EUDR related information (for B2B or B2C purposes).

Some useful links for full explanations of standards and services on data sharing: Transactional data, the Global Data Synchronisation Network (GDSN), the Global Data Model and Event data & EPCIS.

4.3 Summary per data flow

In the final paragraph the actions related to GS1 standards and services, including the European Deforestation Due Diligence Registry are summarised in tables for the supply chains applicable:

- Products imported to and sold in the EU
- Products exported from the EU
- Products produced and sold in the EU

For the processes in the supply chain, GS1 Digital Link is not included in this section. GS1 Digital Link focuses mainly on connecting the scan of a 2D barcode to information to consumers (who do not have an active role in the EUDR).

4.3.1 Commodities and Products exported to the European Union

Outside of the European Union			
Business Need / Actors	Farmer 	Manufacturer 	Exporter 
Identification of locations	Assign (sub-)GLNs for all fields if beneficial to your business	Assign GLN if EDI messaging is going to be used	Assign GLN if EDI messaging is going to be used
Identification of products	Create GTIN + batch for products if beneficial to your business	Create GTIN + batch for (intermediate) products if beneficial to your business	Create GTIN + batch for merged products if beneficial to your business
Populating the EU DDDS Registry	Not applicable	Not applicable	Not applicable
Capturing products (with barcodes)	Label product with a barcode if beneficial to your business	Label new (intermediate) products with a barcode if beneficial to your business	If applicable: Create a new label for merged products if beneficial to your business
Barcoding for logistic units	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product if doing so would be beneficial to your business. If not using DESADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label) if beneficial to your business	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label) if beneficial to your business
Share Master data	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor
Share transactional data	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners.	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners

This table includes a summary of the general “first steps” that each economic actor may need to take if choosing to implement different aspects of the GS1 system in their work toward EUDR compliance. Please connect with your chosen GS1 Member Organisation to learn more.

European Union			
Business Need / Actors	Importer 	Manufacturer 	Distributor / Retailer 
Identification of locations	Assign GLN if EDI messaging is going to be used	Assign GLN if EDI messaging is going to be used	Assign GLN if EDI messaging is going to be used
Identification of products	Create GTIN + batch for products if Create GTIN + batch for new products	Create GTIN + batch for new products	Create GTIN for new (combined) products
Populating the EU DDDS Registry	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry.	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry.	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry.
Capturing products (with barcodes)	Create a label for new consumer facing products, including the barcode	Create a label for new consumer facing products, including the barcode If applicable: Create new label for new (combined) products	If applicable: Create new label for new (combined) products
Barcoding for logistic units	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label) if beneficial to your business	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label) if beneficial to your business Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label) if beneficial to your business	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label) if beneficial to your business
Share Master data	Share relevant master data with the next actor in the supply chain through the system of choice (e.g. through linking to GS1 WebVoc-based master data files via the GRP).	Share relevant master data with the next actor in the supply chain through the system of choice (e.g. through linking to GS1 WebVoc-based master data files via the GRP). At this point the preferred way of sharing structured master data is via GDSN.	Share relevant master data with the next actor in the supply chain through the system of choice (e.g. through linking to GS1 WebVoc-based master data files via the GRP). At this point the preferred way of sharing structured master data is via GDSN.
Share transactional data	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS

4.3.2 Commodities and Products exported from the European Union

This table includes a summary of the general “first steps” that each economic actor may need to take if choosing to implement different aspects of the GS1 system in their work toward EUDR compliance. Please connect with your chosen GS1 Member Organisation to learn more.

European Union			
Business Need / Actors	Farmer 	Manufacturer 	Exporter 
Identification of locations	Assign (sub-)GLNs for all fields if beneficial to your business	Assign GLN if EDI messaging is going to be used	Assign GLN if EDI messaging is going to be used
Identification of products	Assign GTIN or GTIN + batch/lot (LGTIN) for products if beneficial to your business	Assign GTIN or GTIN + batch/lot (LGTIN) for (intermediate) products if beneficial to your business	Assign GTIN or GTIN + batch/lot (LGTIN) for products if beneficial to your business
Populating the EU DDDS Registry	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry
Barcoding for products	Label product with a barcode if beneficial to your business	Label product with a barcode if beneficial to your business	If applicable: Create a new label for merged products if beneficial to your business
Barcoding for logistic units	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)
Share Master data	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor
Share transactional data	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners

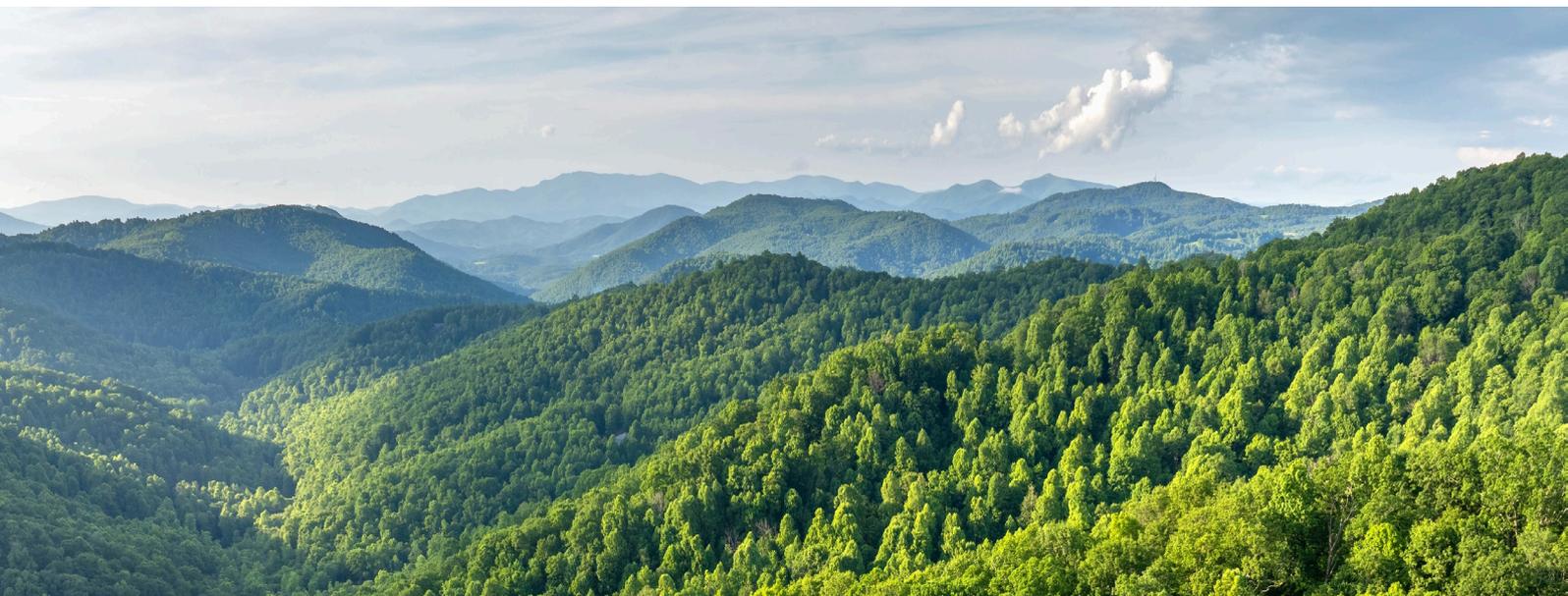
Outside of the European Union			
Business Need / Actors	Importer 	Manufacturer 	Distributor / Retailer 
Identification of locations	Assign GLN if EDI messaging is going to be used	Assign GLN if EDI messaging is going to be used	Assign GLN if EDI messaging is going to be used
Identification of products	Assign GTIN or GTIN + batch/lot (LGTIN) for new products	Assign GTIN or GTIN + batch/lot (LGTIN) for new products	Create GTIN for new (combined) products
Populating the EU DDDS Registry	Not applicable	Not applicable	Not applicable
Capturing products (with barcodes)	Create a label for new consumer facing products, including the barcode	Create a label for new consumer facing products, including the barcode If applicable: Create new label for new (combined) products	If applicable: Create new label for new (combined) products
Barcoding for logistic units	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)
Share Master data	Share all relevant master data with the next actor in the supply chain through the system of choice (e.g. through linking to GS1 Web-Voc-based master data files via the GRP). Ensure that the product is flagged for EUDR and share all minimal data attributes needed for the EUDR	Share all relevant master data with the next actor in the supply chain through the system of choice (e.g. through linking to GS1 Web-Voc-based master data files via the GRP). At this point the preferred way of sharing structured master data is via GDSN. Ensure that the product is flagged for EUDR and share all minimal data attributes needed for the EUDR	Share all relevant master data with the next actor in the supply chain through the system of choice (e.g. through linking to GS1 Web-Voc-based master data files via the GRP). At this point the preferred way of sharing structured master data is via GDSN. Ensure that the product is flagged for EUDR and share all minimal data attributes needed for the EUDR
Share transactional data	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS

4.3.3 Commodities and Products from the European Union

European Union				
Business Need / Actors	Farmer 	Intermediary / Processor 	Manufacturer 	Distributor / Retailer 
Identification of locations	Assign (sub-)GLNs for all fields if beneficial to your business	Assign (sub-)GLNs if not done by farm	Assign GLN for EDI messaging	Assign GLN for EDI messaging
Identification of products	Assign GTIN or GTIN + batch/lot (LGTIN) for products if beneficial to your business	Assign GTIN or GTIN + batch/lot (LGTIN) for products if beneficial to your business	Assign GTIN or GTIN + batch/lot (LGTIN) for products	Assign GTIN or GTIN + batch/lot (LGTIN) for new (combined) products
Populating the EU DDDS Registry	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry	Assign GTIN or GTIN + batch/lot (LGTIN) for products if beneficial to your business	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry	Submit a Due Diligence Statement if a new product that is listed in Annex 1 is created. A reference number and verification number is generated by the EU DDDS Registry
Barcoding for products	Label product with a barcode if beneficial to your business	Label product with a barcode if beneficial to your business	Create a label for new consumer facing products, including the barcode	If applicable: Create new label for new (combined) products
Barcoding for logistic units	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DES-ADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DES-ADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DESADV include the relevant data through AIs (printed on the logistic label)	Create a GS1 logistic label containing the SSCC, the GTIN + batches for the product. If not using DES-ADV include the relevant data through AIs (printed on the logistic label)
Share Master data	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor.rer / distributor	At this stage structured data sharing usually is not in place through GDSN or other means (e.g. through linking to GS1 WebVoc-based master data files via the GRP). Data is shared one on one between supply chain partners. In case of a big actor in the supply chain, see manufacturer / distributor.	Share all relevant master data with the next actor in the supply chain through the system of choice e.g. through linking to GS1 WebVoc-based master data files via the GRP). At this point the preferred way of sharing structured master data is via GDSN. Ensure that the product is flagged for EUDR and share all minimal data attributes needed for the EUDR.	Share all relevant master data with the next actor in the supply chain through the system of choice e.g. through linking to GS1 WebVoc-based master data files via the GRP). At this point the preferred way of sharing structured master data is via GDSN. Ensure that the product is flagged for EUDR and share all minimal data attributes needed for the EUDR.
Share transactional data	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners.	Conduct business as usual. If desired, the use of EDI transactional messages and/or EPCIS messages can be implemented between business partners.	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS.	Use EDI transactional messages in combination with the logistic label between business partners. When available in the EDI standards, include the reference number and verification number as generated by the EU DDDS.

5. Conclusions and Challenges

Many companies struggle to navigate new regulations, from interpreting them accurately to establishing internal governance. In the case of EUDR, to confidently demonstrate due diligence, companies must work towards digitalising and mapping the supply chain, enabling seamless and secured data sharing, and ensuring verifiable and up-to-date information.



In this document the European Deforestation Regulation and its requirements have been explained, for all actors involved high level descriptions have been shared on what they are expected to do within the EUDR and how GS1 standards and services can help.

The way on how to implement the EUDR at this moment is not completely final. The European Union Deforestation Information System, which is the IT system that will contain the due diligence statements submitted by operators and traders to comply with the requirements of the Regulation, will be operational by the entry into the application of the Regulation and will provide users with the functionalities listed in Art. 33(2) of the Regulation. You can use this website to declare that due diligence has been performed before the import, export, domestic production or merchandising of products that are in scope of the EU Deforestation Regulation. The Information System User Guide can be found here. To access the Information System, please use the following link: <https://eudr.webcloud.ec.europa.eu/tracesnt/>

5.1 Enhanced transparency

The challenges companies are facing in addressing this new regulation range all the way from understanding how to interpret the new regulation properly to how to set-up the appropriate internal governance and implement the adjustments in the technology systems all within the given timeframe. One of the most pressing issues will be to establish a way to efficiently gather and verify the required data across the supply chain. The global scale of modern supply chains means that large volumes of data add great complexity for companies unless a standardised approach is taken. To be able to say with confidence that the proper due diligence has been conducted, companies must, to an extent, aim at achieving end-to-end transparency across the supply chain. To be able to do this, three key challenges would need to be addressed: For the processes in the supply chain, GS1 Digital Link is not included in this section. GS1 Digital Link focuses mainly on connecting the scan of a 2D barcode to information to consumers (who do not have an active role in the EUDR).

1 Digitalising and Mapping the Supply Chain

Many companies working with the products and commodities targeted by the regulation are sourcing products directly or indirectly from a large number of smaller stakeholders across the globe. Companies, who up until now have been able to rely on larger importers and exporters in Europe and the countries of production for due diligence, will now need accurate and up-to-date information on every upstream stake producer across their supply chain network. This will require significant investments from companies to ensure access to proper technology, resources and expertise for suppliers that may have previously worked in very manual ways.

2 Enabling Seamless and Secure Data Sharing

Given a supply chain where every actor is working in a way that enables transparency, the coordination and management of various stakeholders (each with different systems, objectives, and levels of visibility) will still prove challenging for any company that requires access to accurate and up-to-date data across the entire supply chain. Legacy systems, lack of integration, and compatibility issues will manifest as barriers and complexities to the seamless sharing of data between these diverse systems. Additionally, many companies are often reluctant to implement data sharing-solutions that are dependent on third party-platforms due to concerns about data privacy and security.

3 Ensuring Verifiable and Up-To-Date Information

The information flow between stakeholders can be inconsistent due to varying policies, procedures, and technologies used. This means that companies risk using inaccurate information in due diligence statements. To be able to confidently trace products back to their country of origin and to be able to ensure that suppliers are compliant with the regulation will be a challenge and different approaches across the supply chain can lead to inefficiencies when trying to aggregate data.

5.2 Achieving enhanced transparency

The data accessible through these solutions can guide your path toward EUDR compliance. However to efficiently meet future demands, the capture and sharing of object data throughout the supply chain journey will become essential.

Standards like EPCIS enable capturing key data elements—such as who (GLN), where (GLN), when, what (GTIN + batch and quantity), and why (e.g., harvesting or shipping)—at critical supply chain points such as harvesting, batch mixing, ingredient production, packing, and shipping. Allowing companies to achieve end-to-end traceability without compromising existing systems or external solutions and lets data sharing remain technology-agnostic.

Getting started on the journey toward end-to-end traceability is, however, a longer process. As an example, GS1 TraceWay is a step-by-step approach to design and implement traceability systems where GS1 offers practical details about key aspects of traceability implementation, regardless of the drivers and technologies involved.

Moreover, GS1 is currently working on further GS1 Standards adjustments for EUDR purposes at the Global Standard Management Process (GSMP, more information <https://www.gs1.org/standards/development>). If you are willing to participate in these activities, please reach out to your local GS1 Member Organisation <https://www.gs1.org/contact>

Further questions regarding the Regulation on Deforestation Free Products

For additional inquiries related to the Regulation on Deforestation Free Products (EUDR), we encourage reaching out to local GS1 Member Organisations and relevant authorities within each country. They can provide specific guidance and address any further questions.

Useful links to documentation:

The Regulation on Deforestation Free Products

Information from the European Commission on the regulation

Definition of micro-, small- and medium-sized enterprises

Green paper How GS1 standards can help to meet the EU Deforestation Regulation

About GS1 in Europe

GS1 in Europe is a non-profit organisation uniting 49 member countries and representing over 500,000 companies across Europe. As part of the global GS1 network, we provide a system of internationally recognised standards that enable seamless identification of products, locations, entities, and assets. Our mission is to create a common language for business, fostering efficiency, transparency, and innovation across industries. Together, we drive collaboration and support businesses in Europe.

Do you need help?

GS1 in Europe Member Organisations can support you further in implementing GS1 standards.

Connect with your local GS1 Member Organisation through gs1.eu/gs1-in-europe-member-organisations

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